Installation and Customization - Mainframe

This section describes step by step how to install Entire Event Management on OS/390, BS2000/OSD and VSE/ESA. Where differences in procedure occur, these are noted under separate headings OS/390, BS2000/OSD and VSE/ESA.

This section covers the following topics:

- Installation Jobs
- Using System Maintenance Aid
- Prerequisites
- Installation Tape
- Storage Requirements
- Copying the Tape Contents to Disk
- Installation Procedure
- Define Environment for Entire Event Management Server
- Verify Entire Event Management Interfaces for Message Collection
- Natural Security Definitions
- Entire Event Management in a Non-security Environment
- External Security Definitions
- Logging on to Entire Event Management for the First Time
- Importing Example Definitions
- Define Entire Event Management Server in the Online Environment
- Installation Verification
- Maintaining the Logging Database

Installation Jobs

The installation of Software AG products is performed by installation **jobs**. These jobs are either created **manually** or generated by **System Maintenance Aid** (SMA).

For each step of the installation procedure described below, the job number of a job performing the respective task is indicated. This job number refers to an installation job generated by SMA.

If you are not using SMA, a sample installation job of the same number is provided in the job library on the Entire Event Management installation tape; you must adapt this sample job to your requirements.

> **Note:**
> The job numbers on the tape are preceded by a product code (for example, **NCLI**061).

Using System Maintenance Aid

For information on using Software AG's System Maintenance Aid (SMA) for the installation process, refer to the **System Maintenance Aid Documentation**.

Prerequisites

Before you can install Entire Event Management, the following Software AG products must already be installed at your site:

- Adabas Version 5 or higher
- Natural Version 2.2.7 or higher
- Entire System Server Version 2.1.1 or higher (for BS2000/OSD, OS/390 and VSE/ESA)
- System Automation Tools sub-component SAT Version 2.2.2 (or higher).
- Natural Security (optional)
- Entire Net-Work (optional, for multi-CPU support)
- Entire Broker Version 1.1.1 or higher (optional when using the API)

The System Automation Tools sub-component contains modules shared by the SAT product family: Entire Event Management, Entire Output Management, Entire Operations and Entire Distribution Services. The installation files for the SAT sub-component are always contained on the installation tape of each product of the SAT family.

The installation procedure for the System Automation Tools sub-component is described in Section Installing System Automation Tools / Mainframe of the SAT Installation and Customization Documentation.

The installation procedure for Entire System Server is described in the Entire System Server Installation Documentation.

Notes:

1. **BS2000/OSD:** When the Entire Event Management Server is running on BS2000/OSD, XS capability is required.
2. **OS/390:** Entire Event Management must run on OS/390 Version 5.1 or higher and use JES Version 2.5.2 or higher.
3. **VSE/ESA:** Entire Event Management must run on VSE/ESA Version 2.1 or higher.

Installation Tape

The installation tape contains the files listed in the table below. The sequence of the files is shown in the **Report of Tape Creation** which accompanies the installation tape.

OS/390

File Name	Contents
NCL*nnn*.JOBS	Entire Event Management Installation Jobs
NCL*nnn*.SRCE	Entire Event Management Source Library
NCL*nnn*.LOAD	Entire Event Management Load Library
NCL*nnn*.SYS1	Entire Event Management System File 1 (Adabas)
NCL*nnn*.SYS2	Entire Event Management System File 2 (Adabas)
NCL*nnn*.SYS3	Entire Event Management System File 3 (Adabas)
NCL*nnn*.INPL	Entire Event Management System Libraries (Natural)
NCL*nnn*.ERRN	Entire Event Management Error Messages
NCL*nnn*.SYSE	Sample definitions for System File 2

The notation *nnn* in file names represents the version number of the product.

BS2000/OSD

File Name	Contents
NCL*nnn*.JOBS	Entire Event Management Installation Jobs
NCL*nnn*.SRCE	Entire Event Management Source Library
NCL*nnn*.PAMS	Entire Event Management Module Library
NCL*nnn*.SYS1	Entire Event Management System File 1 (Adabas)
NCL*nnn*.SYS2	Entire Event Management System File 2 (Adabas)
NCL*nnn*.SYS3	Entire Event Management System File 3 (Adabas)
NCL*nnn*.INPL	Entire Event Management System Libraries (Natural)
NCL*nnn*.ERRN	Entire Event Management Error Messages
NCL*nnn*.SYSE	Sample definitions for System File 2

The notation *nnn* in file names represents the version number of the product.

VSE/ESA

File Name	Contents
NCL*nnn*.LIBR	Entire Event Management Installation Jobs Entire Event Management Source and Load Library
NCL*nnn*.SYS1	Entire Event Management System File 1 (Adabas)
NCL*nnn*.SYS2	Entire Event Management System File 2 (Adabas)
NCL*nnn*.SYS3	Entire Event Management System File 3 (Adabas)
NCL*nnn*.INPL	Entire Event Management System Libraries (Natural)
NCL*nnn*.ERRN	Entire Event Management Error Messages
NCL*nnn*.SYSE	Sample definitions for System File 2

Storage Requirements

During installation, the following files are loaded from the installation tape:

OS/390

File Name	Type	Space on 3380 Disk
NCL*nnn*.JOBS	PDS	2 tracks
NCL*nnn*.SRCE	PDS	2 tracks
NCL*nnn*.LOAD	PDS	1 track
NCL*nnn*.SYS1	SEQ	6 tracks
NCL*nnn*.SYS2	SEQ	1 track
NCL*nnn*.SYS3	SEQ	1 track
NCL*nnn*.INPL	SEQ	19 cylinders
NCL*nnn*.ERRN	SEQ	3 tracks
NCL*nnn*.SYSE	SEQ	2 cylinders

BS2000/OSD

File Name (Disk)	Type	Storage Space
NCL*nnn*.JOBS	LMS	19 PAM pages
NCL*nnn*.SRC	LMS	33 PAM pages
NCL*nnn*.MOD	LMS	48 PAM pages
NCL*nnn*.SYS1	SAM	144 PAM pages
NCL*nnn*.SYS2	SAM	33 PAM pages
NCL*nnn*.SYS3	SAM	33 PAM pages
NCL*nnn*.INPL	SAM	5376 PAM pages
NCL*nnn*.ERRN	SAM	96 PAM pages
NCL*nnn*.SYSE	SAM	225 PAM pages

VSE/ESA

File Name	Type	Space on 3380 Disk
NCL*nnn*.LIBR	SEQ	5 tracks
NCL*nnn*.SYS1	SEQ	6 tracks
NCL*nnn*.SYS2	SEQ	1 track
NCL*nnn*.SYS3	SEQ	1 track
NCL*nnn*.INPL	SEQ	19 cylinders
NCL*nnn*.ERRN	SEQ	3 tracks
NCL*nnn*.SYSE	SEQ	1 cylinder

Copying the Tape Contents to Disk

OS/390

If you are not using SMA, copy the job file NCLnnn.JOBS from tape to disk using the sample JCL below.

The following values must be supplied in the JCL:

- In the file names, replace *nnn* with the current version number of the files.
- With the SER parameter, replace *XXXXXX* with the volume serial number of the tape.
- With the LABEL parameter, replace **x** with the sequential number of the tape file (see **Report of Tape Creation**).
- With VOL=SER parameter, replace *YYYYYY* with the volume serial number of the disk pack.

- With the UNIT parameter, specify the device type being used.

```
//   JOB CARD
//V2COPY   EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=A
//IN1      DD DSN=NCLnnn.JOBS,DISP=OLD,UNIT=TAPE,
//            VOL=(,RETAIN,SER=XXXXXX),LABEL=(x,SL)
//OUT1     DD DSN=SAGLIB.NCLnnn.JOBS,DISP=(NEW,CATLG,DELETE),
//            UNIT=SYSDA,VOL=SER=YYYYYY,SPACE=(CYL,(1,1,10))
//SYSIN    DD *
 C I=IN1,O=OUT1
/*
```

Then adapt and run job NCLTAPE from the job file to copy the source and load libraries from tape to disk. The sample jobs directly use the sequential files from tape.

The file type and the space each file requires on disk are shown in the **Report of Tape Creation**.

BS2000/OSD

If you are not using SMA, copy the files from tape to disk using the procedure described below. In this procedure, the following values must be supplied:

- In the file names, replace *nnn* with the current version number of the files.
- Replace all *xxxxxx* with the volume serial number of the tape.

Step1

Copy the job file NCL*nnn*.JOBS from tape to disk using the BS2000/OSD utility PERCON or EDT.

If you use PERCON, issue the following commands:

```
/FILE NCLnnn.JOBS,VOL=xxxxxx,DEV=T9G -
/     ,STATE=FOREIGN,FSEQ=UNK,LINK=PCIN
/FILE P.NCLnnn,LINK=PCOUT
/EXEC PERCON
END
```

If you use EDT, issue the following commands:

```
/FILE NCLnnn.JOBS,VOL=xxxxxx,DEV=T9G -
/      ,STATE=FOREIGN,FSEQ=UNK,LINK=EDTSAM
/EXEC EDT
@ READ '/'
@ SY '/REL EDTSAM'
@ WRITE 'P.NCLnnn'
@ HALT
```

Step2

Then issue the following command:

```
/CALL P.NCLnnn,PRODUCT=NCLnnn
```

A sample job library LIB.NCLnnn will be created from the procedure file.

Step3

Adapt job E.NCLTAPE from the sample job library.

Then issue the following command to run the job, which copies all files from tape to disk:

```
/E LIB.NCLnnn.JOBS(E.NCLTAPE)
```

VSE/ESA

The sample JCS supplied on tape for the installation of Entire Event Management assumes one library (SAGLIB).

Copy the sublibraries containing the load and sample installation jobs from tape using the following JCS:

```
* $$ JOB JNM=RESTORE,CLASS=0
* $$     DISP=D,LDEST=*
* $$ LST CLASS=A,DISP=D
// JOB RESTORE
// ASSGN SYS005,IGN
// ASSGN SYS006,CUU,VOL=xxxxxx
// MTC REW,SYS006
// MTC FSF,SYS006,nn                 * For the value of nn, see the tape report
* *** Now process NCLnnnJ.LIBR - JOBS ***
// EXEC LIBR,PARM='MSHP'
 RESTORE SUB=(SAGLIB.NCLnnn:SAGLIB.NCLnnn -
         SAGLIB.NCLnnnJ:SAGLIB.NCLnnnJ) -
  TAPE=SYS006 -
  LIST=YES -
  REPLACE=YES
/*
/&
* $$ EOJ
```

The notation *nnn* represents the version number of the product.
The notation *xxxxxx* represents the volume serial number of the tape.

All further files will be used directly from tape by the installation jobs.

Installation Procedure

Note:
If the installed version of the System Automation Tools sub-component is older than the version provided with the installation tape, install the SAT sub-component according to the description provided in Section Installing System Automation Tools / Mainframe of the SAT Installation and Customization Documentation.

Step 1: Entire Event Management System Files

1. **Installing Entire Event Management for the first time**

   For information on ADALOD utility parameters for loading the System Files, refer to Job I050, Steps 3103, 3106 and 3109.

   Entire Event Management System File 1 contains data which are interpreted by the command processor and control logic and must be loaded containing all data.

   Entire Event Management System File 2 holds all definitions created with Entire Event Management. The file NCL*nnn*.SYSE supplied on the installation tape contains some examples. These examples can be loaded into System File 2 with the Import / Export Utility (see the subsection Importing Example Definitions).

   Entire Event Management System File 3 holds all messages analyzed for logging by the Entire Event Management Server.

2. **Migration from version 1.3.1 or 1.3.2 to 2.1.1**

   We recommend using new files for System Files 2 and 3.

   Delete System File 1 and load the new FDT and data with Job I050, Steps 3102 and 3103.

   With Job I050, Step 3104 (the Export Utility from your old version of Entire Event Management), export all definitions already entered in System File 2 which you want to retain. Load the new FDT with Job I050, Step 3106.

   With Job I050, Step 3107 (the Export Utility from your old version of Entire Event Management), export all messages logged in System File 3 which you want to retain. If your System File 3 contains thousands of messages, Step 3107 can consume a large amount of CPU time, so you should select only messages you really need.

   Load the new FDT with Job I050, Step 3109.

   After having installed the new Entire Event Management system libraries (Step 3), import your exported definitions and messages with the Import Utility (Job I200, Steps 3102 and 3103).

Step 2: Scratch Entire Event Management Libraries and SYSERR Messages - Job I051, Steps 3100 and 3101

If Entire Event Management has been installed before, scratch all members from the SYSNCL, SYSNCLIE and SYSNCLSV libraries and delete the related SYSERR messages.

Step 3: Load the INPL File(s) and the Message File(s)

Use Job I061, Steps 3100 and 3102 to load the programs and error messages for Entire Event Management.

Library	File	Contents
SYSNCL	FNAT	Entire Event Management online part
SYSNCLSV	FNAT	Entire Event Management Server part
SYSNCLIE	FNAT	Entire Event Management utilities
SYSNCLCO	FNAT	Entire Event Management common objects
SYSNCLPI	FNAT	Entire Event Management Application Programming Interface

For further information on the INPL and ERRLODUS utilities, see the **Natural Administrator's Documentation.**

Step 4: Adapt all Online Natural Parameter Modules - Job I080

1. Add or change the following parameters in your NATPARM module:

```
NTFILE ID=201,DBID=<NCLSYSF1-DBID>,FNR=<NCLSYSF1-FNR>
NTFILE ID=202,DBID=<NCLSYSF2-DBID>,FNR=<NCLSYSF2-FNR>
NTFILE ID=203,DBID=<NCLSYSF3-DBID>,FNR=<NCLSYSF3-FNR>
```

If you have Entire Operations and would like to start a job network from within Entire Event Management, add or check the following parameter:

```
NTFILE ID=216,DBID=<NOPSYSF1-DBID>,FNR=<NOPSYSF1-FNR>
```

 (for all Entire Operations versions) and

```
NTFILE ID=173,DBID=<NOPSYSF2-DBID>,FNR=<NOPSYSF2-FNR>
```

(for Entire Operations version 141 and above).

For further details, see the Entire Operations Installation Documentation.

2. Reassemble and link the NATPARM module when modification is complete. JCL is contained in the member NATI080 in the Natural Installation Job Library.

Step 5: Relink all Online Natural Nuclei (Job I080)

If you wish to use the Entire Event Management API, you must include the Entire Broker stub module before you perform the relink. See step 6 for correct syntax.

Note:
See Section Installing System Automation Tools / Mainframe of the SAT Installation and Customization Documentation.

Step 6: Adapt Parameter Modules and Link Jobs for Subtask Natural

The Entire Event Management server runs as a Natural subtask. For further information, see Section Installing System Automation Tools / Mainframe of the SAT Installation and Customization Documentation.

In addition to the specifications described in Section Installing System Automation Tools / Mainframe, you must also adapt the following:

1. **Adapt the Subtask Natural Parameter Module (Job I060)**

Add or change the following parameters in your NATPARM module:

```
CSTATIC=          (...,QHNDLR,...     Main storage queue handler.
                  (...,BROKER,...)    Optional for NCL API.
```

```
NTFILE ID=201,DBID=<NCLSYSF1-DBID>,FNR=<NCLSYSF1-FNR>
NTFILE ID=202,DBID=<NCLSYSF2-DBID>,FNR=<NCLSYSF2-FNR>
NTFILE ID=203,DBID=<NCLSYSF3-DBID>,FNR=<NCLSYSF3-FNR>
```

If you have Entire Operations and would like to start a job network from within Entire Event Management, add or check the following parameter:

```
NTFILE ID=216,DBID=<NOPSYSF1-DBID>,FNR=<NOPSYSF1-FNR>
```

(for all Entire Operations versions)

```
NTFILE ID=173,DBID=<NOPSYSF2-DBID>,FNR=<NOPSYSF2-FNR>
```

(for Entire Operations Version 141 and above)

For further details, see the Entire Operations Installation Documentation.

2. **Link Natural Subtask Module**

   VSE/ESA:

   Take the link job as described in Section Installing System Automation Tools / Mainframe of the SAT Installation and Customization Documentation and adapt the following:

   - Include the library definitions for NCLLIB (and ETBLIB, if you are using the Entire Event Management API) in your LNKEDT procedure:
     (LIBDEF chain).

     ```
     ...
     INCLUDE QHNDLR
     INCLUDE TLSRQUEM
     INCLUDE NATETB (Optional Entire Broker stub)
     ...
     ```

   OS/390:

   Take the link job as described in the Section Installing System Automation Tools / Mainframe of the SAT Installation and Customization Documentation and adapt the following libraries for the linkage:

   Supplied Entire Event Management Load Library

   ```
   //NCLLIB DD DISP=SHR,DSN=SAGLIB.NCLnnn.LOAD
   ```

   Supplied Entire Broker Load Library

   ```
   //ETBLIB DD DISP=SHR,DSN=SAGLIB.ETBnnn.LOAD
   ```

The notation *nnn* in file names represents the version number of the product.

```
INCLUDE NCLLIB(QHNDLR)
INCLUDE ETBLIB(NATETB)(Optional Entire Broker stub)
```

BS2000/OSD:

Take the link job as described in Section Installing System Automation Tools / Mainframe of the SAT Installation and Customization Documentation and adapt the following libraries for the linkage:

- Use the library NCLnnn.MOD for the linkage.

- Also use the library ETBnnn.MOD for the linkage if you wish to use the Entire Event Management API.

```
INCLUDE QHNDLR
INCLUDE NATETB(Optional Entire Broker stub)
```

Define Environment for Entire Event Management Server

See also the subsection Defining SAT, Natural and Product Parameters in in Section Installing System Automation Tools / Mainframe of the SAT Installation and Customization Documentation.

For each Entire Event Management Server you must define the run time environment in one or more Natural members in the SAT user library SYSSATU.

If you want to run various Entire Event Management Servers on different Entire System Server nodes *nnn*, you must provide startup parameters at least in the related 'main' members. These must conform to the following naming convention: SATP*nnn*. In addition, you can provide further Entire Event Management- specific parameters in a second member, whose name must not match the naming convention for the 'main' members.

General Layout of a Parameter Block

```
<Prefix> <block-identifier> [<keyword>=<value>,...]
```

where:

Parameter	Description
<Prefix>	SAT or compressed **product code** + **prefix** as specified in the SATSTART instruction.
<block-identifier>	SATENV/NATENV/SATSTART or product block identifier.
[<keyword>=<value>,...]	Block-specific parameter.

Mandatory Parameter Blocks and Parameters for Entire Event Management

Parameter Block	Parameter	Description
NCLENV	NCLSEQF=	Prefix for the name of the Backup Files used by the Entire Event Management Server (see also the subsection Create Backup Files).
	VOLSER=	**VSE/ESA only**: Volume to which the Backup Files used by the Entire Event Management Server are allocated.
	NCLREFR=Y/N	If set to **Y**, Entire Event Management Server downloads the currently assigned definitions from the data base to the backup file and loads from there into main storage. If set to **N**, definitions are loaded directly from the backup file.
SATENV	NSC=YES/NO	Indicates whether Natural Security is installed or not.
	NSCUSER=	If Natural Security is installed, this is the user ID for logging on to it.
	NSCPSWD=	Password for logging on to Natural Security.
	ESYUSER=	User ID for logging on to Entire System Server, if it is installed and an interface to an external security system is activated.
	NATTASK=	Name of the Natural subtask module for starting a server as a subtask.
NATENV	LFILE=(202,<NCLSYSF2-DBID>,<NCLSYSF2-FNR>)	
		Pointer to Entire Event Management System File 2. Make sure that this pointer coincides with the pointer to the Entire Event Management System File 2 provided with the SERVSYSF parameter in the SATSTART block. [1]
	LFILE=(203,<NCLSYSF3-DBID>,<NCLSYSF3-FNR>)	
		Pointer to Entire Event Management System File 3. [1]
	ULANG=1	Language code.
SATSTART	SATVERS=22	Entire Event Management Server startup program supports SAT version 2.2.
	PRODUCT=NCL	3-byte product code.
	PREFIX=	PRODUCT and PREFIX are compressed into a prefix which identifies the Server- specific parameters.
	TYPE=SUBTASK	Entire Event Management Servers are always started as subtasks. [2]
	APPLLIB=SYSNCLSV	Name of the Natural library where Entire Event Management Server is installed.
	SERVSYSF=	Pointer to the Entire Event Management System File 2 (must be unique within all SATSTART instructions of this node).

[1] These pointers can be alternately set in the common NATPARM module created for the System Automation Tools products or in   a Natural parameter profile indicated by the Natural parameter PROFILE.

[2] On BS2000/OSD these subtasks are simulated by Entire System Server, which submits jobs with names
following the convention NCL*xxnnn*, where *xx* stands for the Entire Event Management subtask and *nnn* for
the Server number. Values for *xx* can be:
MA Main Task, **LO** Logging Task, **AC** Action Task, **AN** Analysis Task, **GE** Collect Task,
US User Action Tasks, **CL** System File 3 Cleanup Task, **PI** API Receiver Task.

Optional Parameter Blocks and Parameters for Entire Event Management

Furthermore, you can overwrite the SATENV and NATENV parameters with Entire Event Management-specific or
even Entire Event Management-subtask-specific assignments. The naming convention for the prefix which identifies
the parameter block is:


```
                                     [MAIN] for Main Task
                                     [GETM] for Collect Task
<Prefix> = NCL+<PREFIX>+             [ANLS] for Analysis Task
                                     [LOGG] for Logging Task
                                     [ACTN] for Action Task
```

Parameter Block	Parameter	
NATENV	LFILE=(216,<NOPSYSF1-DBID>,<NOPSYSF1-FNR>)	**1, 2, 3**
	LFILE=(173,<NOPSYSF2-DBID>,<NOPSYSF2-FNR>)	**1, 3, 4**
SATSTART	MEMBER=	**5**

[1] These pointers are only needed if Entire Operations is installed and the Entire Event Management Server is
to start Entire Operations job networks as automated actions.

[2] Pointer to Entire Operations System File 1.

[3] These pointers can be alternately set in the common NATPARM module created for the System Automation Tools
products or in   a Natural parameter profile indicated by the Natural parameter PROFILE.

[4] Pointer to Entire Operations System File 2.

[5] You can specify a member where Entire Event Management-specific parameters are located.

Example: Contents of the 'Main' Member for Node 148 - SATP148 in SYSSATU

The member SATP148 in SYSSAT provides an example of a 'main' member. You can take this as the basis for your
own member: just copy it to SYSSATU and adapt it.

In the example below it is assumed that you are running three products of the SAT product family (Entire Event
Management, Entire Output Management and Entire Operations) as subtasks on Node 148. The parameters of Entire
Event Management are located in a second member NCLPARMS.

SAT	SATENV	NATTASK=SAT225ST, NSC=YES, NSCUSER=SATMON, NSCPSWD=SATMON	[1]
SAT	NATENV	DU=OFF,PROFILE=SATMON	[2]
SAT	SATSTART	SATVERS=22, PRODUCT=NOM, PREFIX=135, TYPE=SUBTASK, APPLIB=SYSNOM, SERVSYSF=(88,51)	[3]
SAT	SATSTART	SATVERS=22, PRODUCT=NOP, PREFIX=211, TYPE=SUBTASK, APPLIB=SYSEOR, SERVSYSF=(88,52)	[4]
SAT	SATSTART	SATVERS=22, PRODUCT=NCL, PREFIX=211, TYPE=SUBTASK, APPLIB=SYSNCLSV, SERVSYSF=(88,54) MEMBER=NCLPARMS	[5]

[1] Sets the System Automation Tools defaults for all System Automation Tools products, here: Entire Event Management, Entire Output Management and Entire Operations.

[2] Sets the Natural defaults for all System Automation Tools products: the Natural profile parameters are provided in the profile
   SATMON.

[3] Specifies that the server for Entire Output Management 1.3.5 should be started as a subtask.

[4] Specifies that the server for Entire Operations 2.1.1 should be started as a subtask.

[5] Specifies that the server for Entire Event Management 2.1.1 should be started as a subtask and that the default parameters are to be overlaid with the parameters from NCLPARMS.

Contents of the Member NCLPARMS in SYSSATU:

NCL211	NCLENV	NCLSEQF=NCL.SYSF NCLREFR=N	[1] [1]
NCL211MAIN	SATENV	ESYUSER=NCLMAIN	[2]
NCL211GETM	SATENV	ESYUSER=NCLGETM	[2]
NCL211ANLS	SATENV	ESYUSER=NCLANLS	[2]
NCL211LOGG	SATENV	ESYUSER=NCLLOGG	[2]
NCL211ACTN	SATENV	ESYUSER=NCLACTN	[2]

[1] Specify Entire Event Management-specific product parameters.

[2] Specify User IDs for each Entire Event Management subtask for logging on to Entire System Server.

Verify Entire Event Management Interfaces for Message Collection

There are two sources from which the Entire Event Management Server can receive messages for further analysis and processing:

- the System Console and
- arbitrary applications which forward events to the Server via the Application Programming Interface (API).

Messages from the System Console

These messages are collected via the Entire System Server view CONSOLE. On OS/390 and VSE/ESA, this view uses the MCS (Multi-Console Support) interface to retrieve the messages, on BS2000/OSD, it uses the UCON interface.

> **Note:**
> The Entire Event Management Server can only react to messages which are not suppressed by means of external filter mechanisms, for example, MPF (Message Processing Facility) on OS/390 or the operating system command ASR on BS2000/OSD.

For more information on how to install and use the CONSOLE view, see the view description of Console in the Entire System Server User's Guide.

Messages from Applications

These messages are collected via the API Receiver, which is a service that registers with Entire Broker and can optionally be started as a subtask of the Entire Event Management Server or as a separate batch job.

The API Receiver then maps the message received from the API client to an internal format and forwards the resulting message to the Analysis Task of the Entire Event Management Server by means of the Entire System Server view EVENTING.

Natural Security Definitions

If Natural Security is installed at your site, you must create the following definitions:

Applications

Application	Description	with STEPLIBs
SYSNCLCO	Entire Event Management common objects	-
SYSNCLPI	Entire Event Management Application Programming Interface	SYSNCLCO SYSSAT
SYSNCLIE	Entire Event Management Import / Export Utility.	SYSEXT SYSSAT SYSSEC SYSNCL SYSNCLCO
SYSNCLSV	Entire Event Management Server application.	SYSNCLCO SYSNCLPI SYSSAT SYSEXT
SYSNCL	Entire Event Management online application.	SYSNCLCO SYSNCLIE SYSNCLPI SYSSAT SYSEXT

User

Define the Natural Security user representing the Entire Event Management Server as **person** with user ID and password identical to <NSCUSER> and <NSCPSWD> parameters described in the subsection Mandatory Parameter Blocks and Parameters for Entire Event Management.

Specify PRIVATE LIBRARY=YES.

If you define the above applications **people-protected**, you must link this User to SYSNCLSV and establish the appropriate link for all users of SYSNCL, SYSNCLIE and SYSNCLPI respectively.

> **Warning:**
> Do not specify a default ETID in order to avoid the error **NAT3048** - duplicate active user IDs.

Entire Event Management in a Non-security Environment

Online:

If Natural Security is not installed at your site:

- the following STEPLIBs are automatically assigned to SYSNCL:
  - SYSEXT
  - SYSSAT
  - SYSNCLCO
  - SYSNCLIE
  - SYSNCLPI

Subtask/Batch:

If Natural Security is not installed at your site:

- the following STEPLIBs are automatically assigned to SYSNCLIE:
  - SYSEXT
  - SYSSAT
  - SYSNCL
  - SYSNCLCO
  - SYSSEC
- and the following STEPLIB is automatically assigned to SYSNCLSV:

  SYSSAT

  For subtask environments you must define the following STEPLIB in the appropriate SATPnnn member in SYSSATU:

```
<prefix> SATENV   STEPLIB1=(SYSEXT,[dbid],[fnr],[CIPHER],[password])
                  STEPLIB2=(SYSNCLCO,[dbid],[fnr],[CIPHER],[password])
                  STEPLIB3=(SYSNCLPI,[dbid],[fnr],[CIPHER],[password])
```

External Security Definitions

OS/390

If Entire System Server is installed with an external security system (RACF, ACF2, TOP SECRET), a user ID identical to the <ESYUSER> parameter must be defined in the security system. (The <ESYUSER> parameter is described in the subsection Mandatory Parameter Blocks and Parameters for Entire Event Management). The user must have access to the system console and **write** access to the Backup Files.

BS2000/OSD

A user ID identical to the <ESYUSER> parameter must be defined to the operating system and must have sufficient authorization to access the system console and to write to the Backup Files. (The <ESYUSER> parameter is described in the subsection Mandatory Parameter Blocks and Parameters for Entire Event Management).

Logging on to Entire Event Management for the First Time

1. Start Natural.
2. Log on to the library SYSNCL.
3. Run the MENU program.

   If you use Entire Event Management on Natural Security, use DBA as your user ID for the first logon. This user ID is added automatically to System File 2 as long as no other users are defined or no user with Administrator authorization can be found.

   If you are not using Natural Security, you have access to Entire Event Management with any user ID as long as DBA is the only user ID defined in Entire Event Management. If this is not the case, your user ID must be defined in Entire Event Management.

4. You can now create your own object definitions in Entire Event Management System File 2 or proceed as described in the subsection Importing Example Definitions.

Importing Example Definitions

If you want to load or expand your Entire Event Management System File 2 with the example definitions provided with NCLnnn.SYSE, adapt JCL E-IMSYS2 provided with the source library and run the customized job. The LFILEs must be specified within this job.

This job invokes the Entire Event Management Import / Export Utility to load the definitions provided in the sequential file NCLnnn.SYSE into Entire Event Management System File 2.

> **Note:**
> The user ID indicated by the Natural system variable ***USER** must be defined in the Entire Event Management System File 2 with **Administrator** authorization, i.e. without a linked Profile that restricts authorization.

Define Entire Event Management Server in the Online Environment

For each Entire Event Management Server in your system configuration, you must perform the following steps:

Add the Node Definition

Add the Node with the direct command ADD NODE<nnn>. The following screen appears:

Add Entire System Server Node

```
 12:56:34                  *** ENTIRE EVENT MANAGEMENT ***              30.05.96
                           - Add Entire System Server Node -

   Node ..... ___                              created ...
 > Comment .. _____ modified ..

   Name .................... _____

   Time Difference .......... __ hour(s)








NCL0644 Please enter Number to add Entire System Server Node.
 Command =>    _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help        Exit  Flip  Do                                          Menu
```

In the Machine field, enter the machine name used in the Machine column of the Logical Console (see also the subsection Add a Logical Console Layout in the section Defining the Logical Environment of the Entire Event Management User's Guide).

▶ **To save the Node definition**

- Press PF5 (Do) or enter DO on the command line and press Enter.

  A message confirms that the new node has been saved:

  ```
  New Entire System Server Node (number) created.
  ```

Add the Server Definition

Define a Server on this Node with the direct command ADD SERVER<*nnn*>. The following screen appears:

Add Server Parameters

```
 09:39:04                   *** ENTIRE EVENT MANAGEMENT ***               30.05.96
                              - Add Server Parameter -

   Server ... 148 P-ESY                          created ...
 > Comment .. _____    modified ..

   Logical Console ....  _____ _____ _____ _____ _____ _____
                         _____ _____ _____ _____ _____ _____
                         _____ _____ _____ _____ _____ _____
                         _____ _____ _____ _____ _____ _____
                         _____ _____ _____ _____ _____ _____

   Log DBID/FNR ....... ___ ___   (NCLSYSF3)    > Suppressed Messages
   ET Threshold ....... 10 Msg or __3 MIN
   Delimiters ......... ,=;_____              + Automation Parameters

   Collect Wait Time .. __1 SEC                 + Installation Backup File
   Msgid Exit ........ _____
   Init. Exit ........ _____                 + Miscellaneous


  Command ===> _____
 Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help        Exit  Flip  Do                                        Menu
```

You must enter parameters for the following fields:

- **Logical Console**
  Enter the Logical Consoles to be served by the Server.
- **Log DBID/FNR**
  Enter Log DBID/FNR (System File 3) to which Server routes messages to be logged. Make certain that this pointer coincides with the pointer to System File 3, which is provided with the appropriate LFILE assignment in the NATENV parameter block (see the subsection Mandatory Parameter Blocks and Parameters for Entire Event Management).
- **Msgid Exit**
  Enter the name of the CALLNAT program to be used in the Collect Task for constructing the message ID from the message text. YMSGID in the SYSNCLSV library provides an example which uses the first token of the message text as ID.

  BS2000/OSD: For BS2000/OSD, the Exit YID-BS2 is provided and should be specified here.

- **Init. Exit**
  Enter the name of the CALLNAT program to get control during startup of the Collect Task. The YINIT subprogram in the SYSNCLSV library provides an example which forwards an initialization message to the Analysis Task via the Event API.

Save the Server definition with the command DO.

Create Backup Files

For every Server defined in Entire Event Management, two Backup Files must be installed to temporarily hold the Server definitions. You can allocate these files online, if the Entire System Server indicated by the Server node number is currently running.

Place the cursor on +Installation Backup Files on the Add Server Parameters screen and press Enter.

A window opens according to the operating system on which the Entire System Server runs. In this window you can allocate files online:

Add Server Parameters - Install Backup Files - window for OS/390

```
 09:54:24                    *** ENTIRE EVENT MANAGEMENT ***                30.05.96
                                - Add Server Parameter -

   Server ... 148 P-ESY                          created ... 30.05.1996
 > Comment  -------------------------------------------------------------------
           !                     - Install Backup Files -                       !
   Logical !                                                                    !
           !    Prefix ...... _____                     !
           !                                                                    !
           !    Definition File 1                                              !
           !      Name ...... .SV148.BACKUP1                                    !
           !      Status ....                                                   !
   Log DBID !      Volume .... _____    Space .... ___ ___ ___                !
   ET Thres !                                                                   !
   Delimite !    Definition File 2                                             !
           !      Name ...... .SV148.BACKUP2                                    !
   Collect  !      Status ....                                                  !
   Msgid Ex !      Volume .... _____    Space ....                           !
   Init. Ex !                                                                   !
           -------------------------------------------------------------------
 NCL2262 Please Confirm execution.
  Command ===> _____
 Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help        Exit  Flip  Conf                                       Menu
```

Prefix Field:

Enter the prefix for the name of the Backup Files. This must be identical to the value of the NCLENV parameter <NCLSEQF> (see the subsection Define Environment for Entire Event Management Server).

The following fields are operating-system-dependent:

Space Field - OS/390 and BS2000/OSD

Enter the value for the **primary space** in the **first** field.
Enter the value for the **secondary space** in the **second** field.
Enter the **unit** for the given values in the **third** field.

Volume Field - OS/390 and VSE/ESA

Enter the volume on which the sequential files are to be allocated.

Ext. Start Field - VSE/ESA only

Enter the start FBA block number or CKD track number for the sequential files <prefix>.SV<*nnn*>.BACKUP1.HD and <prefix>.SV*nnn*.BACKUP2.HD respectively.

If you leave this field blank, VSE/ESA selects the block or track number for the backup files; alternatively, you must specify a block or track number for Backup File 2 according to the required space.

Space Field - VSE/ESA only

Enter the number of tracks needed for the sequential file. The following sequential files are then allocated with the space indicated:

Sequential File	Number of Tracks
<prefix>.SV<*nnn*>.BACKUP1.HD	1 track
<prefix>.SV<*nnn*>.BACKUP1	as required
<prefix>.SV<*nnn*>.BACKUP2.HD	1 track
<prefix>.SV<*nnn*>.BACKUP2	as required

Confirm the allocation by entering CONFIRM in the Command ===> line and pressing Enter.

> **Note:**
> The Entire System Server node **<nnn>** must be active to perform this file installation.

If you use another method of allocating the files, use the following attributes:

File Allocation Method	Attribute
Fileame	<prefix>.SV<*nnn*>.BACKUP1 and BACKUP2 (nnn=node number of server)
DSORG	PS
LRECL	253
BLKSIZE	253 (must be the same as LRECL for the moment)
RECFM	FB.

The following table should be used to estimate the space required. (**If you do not want to estimate the space, start with a value of 1CYL**). It gives the number of records needed for each type of object definition contained in the data base:

Entity Definition	No. of Records
Server Parameter	8
Message Range	4
Logical Console	1
Event	4
Action	1

In addition on VSE/ESA, the sequential header files **<prefix>.SV<nnn>.BACKUP1.HD** and
<prefix>.SV<nnn>.BACKUP2.HD must be allocated with the same attributes and with one track for each file.

Using NET-Type Actions

If you want to use NET-type Actions that must interface with Entire Operations:

either:

- define the Entire Operations System Library (SYSNOP in Version 1.3 or SYSEOR in Version 1.4 or higher) as a STEPLIB for SYSNCL and SYSNCLSV;

or:

- copy all modules starting with NOPU from the Entire Operations System Library to the Entire Event Management Libraries SYSNCL and SYSNCLSV or to any Natural STEPLIB of the Entire Event Management online and Server environment.

Using NAT-Type Actions

If you want to use NAT-type Actions, you must define a default Action Library.

▶ **To do this**

1. Place the cursor on +Automation Parameters and press Enter.

   The following window opens:

   Add Server Parameters - Automation Parameters

```
 10:21:57                  *** ENTIRE EVENT MANAGEMENT ***            30.05.96
                              - Add Server Parameter -

   Server ... 148 P-ESY                      created ... 30.05.1996
 > Comment   ------------------------------------------------------------------
             !                    - Automation Parameters -                   !
   Logical   !                                                                !
             ! Rule Timeout .......... _30 SEC    Loop Criterion _             !
             ! Rule Locktime ......... ___ ___    Loop Frequency _10           !
             !                                    Resumetime ... ___ ___       !
             ! Action Program Library                                         !
             !   Database Nr ......... ___                                    !
   Log DBID  !   File Nr ............. ___                                    !
   ET Thres  !   Library ............. _____                              !
   Delimite  !                                                               !
             ! Initial Size of Active Queues                                 !
   Collect   !   Root Events ........ _____                               !
   Msgid Ex  !   Dependent Events .... _____                              !
   Init. Ex  !                                                               !
             -------------------------------------------------------------------

  Command ===> _____
 Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help        Exit  Flip  Do                                        Menu
```

2. Enter Database Nr, File Nr and Natural Library name of the FUSER where NAT-type Actions are located.

If you omit Database Nr and File Nr, the FUSER currently defined takes effect.

3. Copy the program EXNAT--P from the SYSNCLSV library to your defined Action Library using the Natural SYSMAIN utility. Use this as a program frame or as an example to build your own NAT-type Actions.

    If Natural Security is installed, the User ID indicated by the <NSCUSER> parameter must be linked to the Action Library if the Action Library is defined as **people-protected**.

Installation Verification

To verify that an Entire Event Management Server, identified by node number *nnn*, has been installed correctly, proceed as follows:

1. Check the environment defined for the Entire Event Management Server:
   - Verify the startup parameters defined in the library SYSSATU.
     - Logon to the library SYSSATU where you keep your master definitions for all Servers of the SAT family.
     - Check that the SAT*nnn* entry in the member SATDIR points to the correct FNAT for the application SYSSAT.
     - Check member SATP*nnn* for the SATSTART entry with PRODUCT=NCL. The TYPE parameter must have the value SUBTASK; the APPLIB parameter must have the value SYSNCLSV, and the SERVSYSF parameter must point to the correct Entire Event Management System File 2 where the object definitions assigned to the Server are kept.
     - Check member SATP*nnn* and the member <NCLPARMS> indicated by the MEMBER parameter in SATP*nnn* for the SATENV parameter NATTASK. The value in effect for the Entire Event Management Server *nnn* must indicate the correct Natural subtask module which is intended to run the Entire Event Management Server.

       This Natural module must be correctly linked, marked REENTERABLE and REUSABLE, and must be accessible in the run time environment of the Entire System Server node *nnn*.

     - Check member SATP*nnn* and/or member <NCLPARMS> indicated by the MEMBER parameter for the parameter NCLSEQF in the NCLENV block. This parameter must point to two sequential files with the names <NCLSEQF>.SV*nnn*.BACKUP1 and <NCLSEQF>.SV*nnn*.BACKUP2 respectively. These files must be allocated and for the first startup must either both be empty or must consist of only one record containing the string NEW. On VSE/ESA, the sequential files <NCLSEQF>.SV*nnn*.BACKUP1.HD and <NCLSEQF>.SV*nnn*.BACKUP2.HD must also be allocated.
     - Check the member SATP*nnn* and/or the member <NCLPARMS> indicated by the MEMBER parameter for the SATENV parameters NSCUSER, NSCPSWD and ESYUSER. If you use Natural Security, <NSCUSER> must be defined as **user** and must have access to the library SYSNCLSV and to the Action Program libraries.

       If Entire Security Server is running with security, (i.e.: SECURITY<>NONE), the user ID indicated by <ESYUSER> must be defined in the external security system and have sufficient authorization.

   - Verify the Server Parameters defined with the object Server *nnn*.
     - Log on to the library SYSNCL and invoke the MENU program.
     - Type in the direct command MODIFY SERVER nnn. On the Modify Server Parameter screen verify that the Log DBID/FNR parameter points to the correct Entire Event Management System File 3, where the Server should log the console messages.

       Link at least one Logical Console to the Server.

     - Invoke the Miscellaneous window by typing MISC as a direct command and pressing Enter. The following window opens:

Modify Server Parameters - Miscellaneous Server Parameters

```
 10:30:12                  *** ENTIRE EVENT MANAGEMENT ***                30.05.96
                            - Modify Server Parameter -

   Server ... 148 P-ESY                      created ... 30.05.1996
 > Comment  ------------------------------------------------------------------
           !                  - Miscellaneous Server Parameters -            !
   Logical !                                                                 !
           ! Write to (Udf) Console from . 00:00 to 00:00                    !
           !                                                                 !
           ! API Receiver Service ........ _____                  !
           !     Wait before retry ....... ___ ___                          !
           !                                                                 !
   Log DBID ! Perform SYS3-Cleanup at ..... 06:00   Trace the Cleanup _      !
   ET Thres !                                                                !
   Delimite ! Prefix of (Log) Messages .... NCL                             !
           ! Write (Log) Messages                                           !
   Collect !  to Logical Consoles ............. X                           !
   Msgid Ex !  to Physical Console ............. _                           !
   Init. Ex !  to Server Task Sysout ........... X                          !
           ------------------------------------------------------------------

   Command ===> _____
 Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help        Exit  Flip  Do                                       Menu
```

○ To prepare for step (2) below, establish a non-empty time frame for logging messages to the (Udf) Console. The Server should then log all messages to its (Udf) Console which are not covered by your own Logical Console definitions.

2. Start the Entire Event Management Server.

● In the Entire Event Management online system, type in the direct command MONITOR STATISTICS *nnn* to invoke the Server Statistic Monitor screen:

Server Statistic Monitor

```
 10:35:22                  *** ENTIRE EVENT MANAGEMENT ***                30.05.96
 Srv    *                  - Server Statistic Monitor -

 Server . . . 114 F-Mc            NPR Lost        Statistics:
                                                   Refreshed
      Main                     API Receiver       Interval
    +---------+               +---------+
 --->! INACTIVE !             ! UNKNOWN  !
    +---------+               +---------+
                                  0 v
            Collect          Analyze          Logging          Action
    +---------+       +---------+       +---------+       +---------+
    ! INACTIVE !---->! INACTIVE !---->! INACTIVE !  -->! INACTIVE !
    +---------+       +---------+   !  +---------+   !  +---------+
                                   ----------------->

            total 1/sec      total 1/sec      total 1/sec      total 1/sec
 executed . .     0   0.0       0   0.0         0    0.0         0 0.000
 suppressed .     0   0.0       0   0.0
 Events . . .                   0 0.000
 Traffic . .    100 %     . .   0.00 %     . .   0.00 %     . .   0.000 %
 NCL2255 Service by Server 114 not available.
 Command ===> _____
 Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  Auto  Exit  Flip  Rfrsh                                    Menu
```

3. If the status of the Server (directly under the heading Server Statistic Monitor) is NPR Lost, proceed with step (3) to start the Entire Event Management Server together with the Entire System Server.
4. If the Status of the Server is NPR Act, proceed with step (4), below, to start the Entire Event Management Server online.
5. Start the Entire Event Management Server automatically with Entire System Server.

    If the SATSTART block for the Entire Event Management Server in the SYSSATU member SATP*nnn* is provided correctly, the Server is started automatically with the Entire System Server node *nnn*.

    - Start Entire System Server node *nnn*.

        ○ The successful start of the Entire System Server is indicated by the console message:

        ```
        Entire System Server IS READY - X-COM NODE nnn IS INITIALIZED
        ```

        ○ The successful start of the Entire Event Management Server is indicated by the following console message sequence:

        ```
        NCL5001 Task NCLMAIN-lll-kkk invoked successfully
        NCL5001 Task NCLLOGG-lll-kkk invoked successfully
        NCL5001 Task NCLACTN-lll-kkk invoked successfully
        NCL5001 Task NCLANLS-lll-kkk invoked successfully
        NCL5001 Task NCLGETM-lll-kkk invoked successfully
        ```

        where *lll* and *kkk* indicate the DBID and FNR of Entire Event Management System File 2

    - If this sequence does not appear after a while:
        ○ Check the SYSOUT files of the Entire System Server node, if it is running on the MVS/XA or MVS/ESA operating systems.

        ○ If the Entire Event Management Server is running on BS2000/OSD, check the SYSLST protocol files matching the following naming convention - the file name must contain the substring:

        ```
        L.NCLxxnnn
        ```

        where *xx* stands for the Entire Event Management subtask and *nnn* for the Server number.

xx = **MA**	Main Task	**LO**	Logging Task	**AC**	Action Task	**AN**	Analysis Task	**GE**	Collect Task

    - Proceed with step (5).
6. Start the Entire Event Management Server online.
    - In the Entire Event Management online system, type the direct command START SERVER *nnn* and press Enter. The Start Server window opens:

Server Start

```
 10:36:50                *** ENTIRE EVENT MANAGEMENT ***              30.05.96
 Srv     *                     - Main Menu -


    Console -------------------------------------------------------------------
         !                           - Server Start -                        !
   1  Log !                                                                   !
   2  Ser ! Server  . . . . . 114  F-Mc       MVS/ESA    NPR Act             !
         !                                                                   !
         ! Task States                                                       !
  Adminis !  Main Task . . . . INACTIVE                                      !
         !  Collect Task  . . INACTIVE                                       !
   3  Env !  Analysis Task . . INACTIVE                                      !
   4  Aut !  Logging Task  . . INACTIVE                                      !
   5  Aut !  Action Task . . . INACTIVE                                      !
   6  Cal !                                                                   !
         ! Backup File . . . . NCL.SYSF.SV114.BACKUP2                        !
   .  Exi ! Renewed . . . . . . 96-05-29 15:42:36                            !
   ?  Hel !                                                                   !
   *  Com -------------------------------------------------------------------
 NCL2262 Please Confirm execution.
  Command ===> _____
 Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help         Exit  Flip  Conf                                     Menu
```

- Confirm your start request by typing the direct command CONFIRM and pressing Enter.
- Proceed with step (5).

7. Monitoring the Entire Event Management Server.

   - In the Entire Event Management online system, type the direct command MONITOR STATISTICS *nnn* and press Enter. The Server Statistic Monitor screen appears.

      ○ After a while the status of each Server subtask should be indicated in the appropriate box as either RUNNING or WAITING and the status of the Entire Event Management Server in total should be indicated as NCL Act directly under the heading Server Statistic Monitor.

      ○ In addition, since you have enabled (Udf) Console in step (1), the statistic line **executed** should, after a short delay, show values greater than 1 under the Collect, Analyze and Logging boxes.

   - If the subtask status and values do not change, issue any operator command to the Entire System Server node *nnn* by typing the direct command:

   ```
   OPER nnn <operator command>
   ```

   - If the Monitor still shows no message traffic, the interface to the system console is most probably not installed correctly. Therefore, make sure that the Entire System Server view CONSOLE is correctly installed (see the subsection Verify Entire Event Management Interfaces for Message Collection).

Maintaining the Logging Database

Entire Event Management automatically maintains the messages logged to System File 3 according to the following logic:

- External messages are logically deleted from user-defined consoles, if their time stamp is older than the current time minus the lifetime of the respective Logical Console. They are physically deleted, if there is no reference left to a Logical Console.
- External messages routed to the Server-related (Udf) Consoles are physically deleted, if they are older than 1 day.
- For each Server **<nnn>**, the messages routed to its **(Act<nnn>)**, **(Aut<nnn>)** and **(Log<nnn>)** are physically

deleted, if they are older than those respective Server start messages, which are older than the oldest external message left over after deletion.

For OS/390

Message maintenance is performed in a separate subtask of the Server which can be started automatically every day by setting up the schedule time in the Server parameter Perform SYS3 Cleanup at (see the subsection Miscellaneous Server Parameters) in Section Defining the Physical Environment.

The name of the subtask is NCLCLNP-*iii-jjj*, where *iii* represents the DBID and *jjj* the FNR of the System File 2 currently being used by the Server. The result can be viewed in the assigned SYSOUT file.

For BS2000/OSD

Message maintenance is performed in a separate job which can be started automatically every day by setting up the schedule time in the Server parameter Perform SYS3 Cleanup at (see the subsection Miscellaneous Server Parameters) in Section Defining the Physical Environment.

It is named NCLCL*nnn*, where *nnn* stands for the Node number of the Server. The result can be viewed in the protocol file of the job NCLCL*nnn*.

In addition, the user can start the maintenance utility manually by submitting the customized JCL provided with the member ESYS3DEL of NCL*nnn*.SRCE.